G. R. S. 1X-5]

Previous references.

"Preserved" 1927-26

(Epm)

File No 62-19

Serial Nos 156, 6a, 7674

Later references.

Epm

Part-17-23-(1-3)

"Preserved"

"Destroyed"

GENERAL AND REVENUE SECRETARIAT

Serial Nos. Fifteen a2

Part B for January 1920

SUBJECT

Inventions for improvements in or relating to petroleum distillation for the production of low-boiling-point products by the Standard Oil Co, an Indiana corporation having offices at Indiana and Chicago, Illinois USA

8214) To: the Chief Engineer
& Supdt Govt Gardens
& Secy to the Board for Chemical Research

No G 16936-8 dtd 23.1.20

Forwarding a copy of the Specification of
the above mentioned

WD 2233-GPB-20,000-11 6-20

4218

Invention no 3919

G. R. S. III—1] 1919-20

GENERAL AND REVENUE SECRETARIAT.

(G. W)

NOTES.

File No. 62-

FILE HEADING.

Invention for "improvements in or relating to Petroleum distillation for the production of Low boiling points Hydrocarbons" by The Standard Oil Company, an Indiana Coporation of Whiting, Indiana and Chicago, Illinois U.S.

From

Messrs Ranken Reid Son, Calcutta

No. Letter Dated 23-8-19 Received 30-8-19

Diary No. 4218	Enclos. 3 Spare Copies.	Serial No. 1

BRIEF ABSTRACT OF LETTER.

Forwards a power of attorney and a deed of assignment in favour of the applicant Company for leave to file a specification of the above and advise despatch of Rs 13/- towards the stamp duty on the Power and the Deed and the application fee.

NOTES AND ORDERS.

A

The amount of Rs 13/- has been received Vide M.O. Coupon hereunto put up. Submitted into the Treasury Remittance Register for sending money to the Treasury. Usual drafts submitted for approval or orders

30.9.19

NOTES—First Sheet.

G. R. S. III-2]

6 1920

General and Revenue Secretariat. | G.M. File No. 62 of 1919.

Serial No.	
2	From the Asst Dy officer. Dy: Rh: No 194 dt 13.9.19 Acknowledge the receipt of Rs 10 refd: to in 1
3	To The Supdt of Stamps. G. 6922 dt 17-9-19 Forwards the power of attorney & the deed of assignment refd: to in 1 for being impressed with the Mysore Stamp.
4	To The Secy to the Board for Chemical & Indl: Research G. 6923 dt 17.9.1919 Forwards for the opinion of the Board the applin: refd: to in 1
	From
5	The Supt of Stamps Letter no 112 dated 20.9.19 With reference to 3 forwards the Power of Attorney and the Deed of Assignment duly stamped. Submitted with draft 24.9.19

NOTE—Contd. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

D 8628
10874

G. R. S. III-2j

General and Revenue Secretariat. | G.R. File No. 62 of 1919.

Serial No.	
6	To the Superintendent of Exam. G. 8677 dt. 13.10.19. Acknowledges the receipt of the powers of attorney in, & to in M. 5
6a	From Messrs Rempsey and Son. Calcutta Letter dt 7-11-19 Forwards a certified copy of the Brit. & patent of the above invention (M. 1). The expert opinion called for in M. 4 above may be awaited 13.11.19
7	From The Secretary to the Board for Scientific and Industrial Research Letter no 182 dt 18-12-19 States with reference to M. 4, that leave may be granted to file a specification of the invention The expert opinion is favourable. Submitted with the 2 usual drafts for appl 20/12/19 P.T.O. First Member 26/12

NOTE—Contn. sheet.

10876

G. R S. III-2]

General and Revenue Secretariat.

File No. 2 of 1919.

Serial No.	
4142.257 29.12.19	Draft to approved Pell 30.12.19 Done MW 30/12
8	G.O. No 15537 & / 9.1.1920 Authorises the filing of the Specification of the Invention refd: to in No 1
9	To Messrs. Remfry & Sons - Calcutta G. 15538 dy 9.1.1920 Forwards the G.O. issued on Subject for being sent to the Party Concerned.
10	From Remfry and Son, Calcutta Letter dy 13-1-1920 With reference to Nos 8, forwards 4 Copies of the Specification of the invention and advise remittance of Rs 30/- being the filing fees thereon and request that the Certificate at the foot of the G.O. (No 2) may be filled in and returned The filing fees have been received. The D.R.R. is putup only entered for sending the money to the Treasury.

NOTE—Contn. sheet.

A.T.O.

12298

G. R. S. III-2]

General and Revenue Secretariat. | G. M File No. 62 of 1919.

Serial No.	
	The certificate at the foot of the G. O. (pl. 8) requires initials and signature. Submitted with the usual Drafts.
	20.1.20
	Issue 20/1/20.
11	From the Hon'ble Maj: Rh: No. 2225 of 21.1.1920 Acknowledges the receipt of No. 30,
12	To ~~Messrs~~ ~~Remfry & Sons~~ Solicitors, Bombay G. 16934 of 23.1.1920. Notifies the filing of the Specification of the invention
13	To ~~Messrs~~ Remfry & Sons G. 16935 of 23.1.1920. Forwards a copy of notn: rec'd: to the Mint
14	To The Chief Engineer " Superintendent Port Trustee " Secy: to the Bd: for ~~check~~ Indl: Notice G. 16936-8 of 23.1.1920 Forwards a copy of the Specification of the invention for record in his Office

NOTE—Contn. sheet.

4218 C

DIARY NO.

REGISTERED.

To

THE ~~CONTROLLER OF PATENTS~~, SECY TO THE GOVT OF MYSORE,
~~PATENT OFFICE~~, GENL. & REV. DEPTS.,
~~CALCUTTA~~. BANGALORE,
~~M-Y-S O.R E.~~

FROM

REMFRY & SON,
PATENT & TRADE-MARK ATTORNEYS,
CALCUTTA.

GEN. & REV. DEPT.
30 AUG 1919

Dated CALCUTTA, the 23rd August 1919.

6323 SIR,

DEPT.	P.	FILE LR.	M.
FILE INDICATION			
Mysore Pats. (Genl)			

CHIEF SECRETARIAT.
IV
MINOR
30 AUG 1919

re STANDARD OIL CO. (MYSORE)

No. *dated*

We have the honour to forward herewith an Application of STANDARD OIL COMPANY, an Indiana Corporation of Whiting, Indiana and Chicago, Illinois, U.S.A., Manufacturers, for leave to file a Specification under Part I of the Mysore Inventions & Designs Regulation, 1894, in respect of an Invention for "IMPROVEMENTS IN "OR RELATING TO PETROLEUM DISTILLATION FOR THE PRODUCTION OF LOW-"BOILING-POINT HYDROCARBONS", and solicit the favour of your submitting the same to H.H. the Dewan.

A Deed of Assignment from Edgar Milton Clark in favour of the Applicant Co. (consideration £10-0-0) and a Power of Attorney under which we are acting are also enclosed and we solicit the favour of your having such Assignment stamped Rs.2/- and Power of Attorney Re.1/- respectively.

A Post Office Order for Rs.13/- is also sent to-day.

We have the honour to be,
Sir,
Your very obedient servants,

Enclos:-
Appln.
Asst.
P/A.

MYSORE APPLN.

By P.O.O:-
Rs.13/-.

P/O (Genl.) 1,000—7-6-18 [4-2-14—17-3-11].

FORM 29b.

APPLICATION.

TO THE DEWAN OF MYSORE:

The Application of STANDARD OIL COMPANY, an Indiana corporation, Manufacturers, of Whiting, Indiana and Chicago, Illinois, U. S. A., for leave to file a Specification under Part I of the Mysore Inventions and Designs Regulation, 1894.

(I) The Applicant STANDARD OIL COMPANY has obtained a Patent in the United Kingdom No. 1424/15 dated and sealed as of the 20th day of April, 1914 and actually sealed on the 28th day of October, 1915, for "IMPROVEMENTS IN OR RELATING TO PETROLEUM DISTILLATION FOR THE PRODUCTION OF LOW-BOILING-POINT HYDROCARBONS"

(2) To the best of the information and belief of the Applicant, the Invention is new within the meaning of Part I of the Inventions and Designs Regulation, 1894; and no circumstance exists which, if the Applicant is authorised to file a Spefication and files it in accordance with that Part, will disentitle him to an Exclusive Privilege thereunder in respect to the Invention.

(3) The following is a description of the Invention:-

This invention relates to an improvement in distilling petroleum or liquid residue of petroleum distillation for obtaining therefrom low-boiling-point hydrocarbons.

Where according to common practice, the liquid material is contained in a reservoir-like still, to the bottom of which the heat is applied, the danger is ever present of an opening forming in the boiler-bottom, due to flaw in the metal, the bottom burning out or other cause. When this occurs, the entire contents of the still discharge into the fire, producing a more or less disastrous conflagration. This result is more likely to ensue where the distillation is carried on at a temperature sufficiently high to crack the petroleum contents of the still, whereby free carbon is developed and accumulates on the still-bottom, on which it lies in red hot condition and tends to burn it out.

The primary object of the invention is to provide a process whereby discharge of the contents of the still, through an accidental opening occurring therein from any cause, shall not

produce serious consequences but shall avoid damage of any kind other than the loss of a small part of the charge and temporary disabling of the still.

According to this invention the process consists in circulating the liquid forcibly and rapidly in a relatively small stream under confinement and subjection to a cracking temperature from and back to a bulk-supply of the liquid material, taking off and condensing the resultant vapours and maintaining a pressure of said vapours on said supply.

The accompanying drawing illustrates diagrammatically, as suitable for the practice of the improved process, an equipment of apparatus involving a so-called pressure still, in which the distillation is carried on under a high temperature of 650° to 850° F. and a pressure of 3 to 7, or more, atmospheres produced by the vapours discharging from the still.

At 1 is shown an upright tank or reservoir supported in elevated position and having a rounded bottom, from above which leads a pipe 2 containing a force-pump 3, of any suitable construction. This pipe leads from the discharge-side of the pump to one end of a pipe-coil 4 in a furnace 5, which is preferably coal-burning. The opposite end of the coil communicates through a pipe 6 with the reservoir 1 at its upper end, from which leads a discharge-pipe 7 to the upper end of a water-cooled condenser-coil 8, the discharge-end of which, containing a valve 9, leads to a receiving-drum for the distillate. A pipe 11 rises from the lowermost branch of the coil 8 through the condenser tank, above which the pipe contains a valve 12.

The apparatus shown is particularly designed for the manufacture of gasoline by distilling under pressure the residue of petroleum-distillation, such as fuel-oil, to produce it. In the apparatus illustrated, the liquid material to be distilled is charged

into the reservoir, which may contain several thousand gallons. With the pump in action and the furnace going, the valves 9 and 12 being closed, the contents of the reservoir are circulated, passing from the reservoir by way of the pipe 2 through the pump, which forces the liquid in a relatively fine stream through the coil 4, whence it returns in heated condition through the pipe 6 to the reservoir. By continuing this circulation, the heated liquid returning from the coil 4 to the reservoir heats the contents of the latter and the resultant vapours pass off through the upwardly-inclining pipe 7 and condenser. These vapours build up a pressure on the contents of the reservoir of from about 3 to 7, or more, atmospheres and raise their temperature to about 650° F. and as the run proceeds, to about 750° F., or higher. Gases accumulating in the condenser are allowed to escape from time to time, on opening the valve 12, for relieving the gas-pressure, which is liable to accumulate in the coil and obstruct the action of the apparatus. From time to time the valve 9 is opened for discharging the distillate into the drum 10. This distillate is crude gasoline of superior quality, and it may be subjected to further treatment, well-known in the art, for refining it. The described method of distillation is continued until and is arrested when distillate to the amount of approximately 55% of the charging stock has been collected in the drum 10, that having been found to be the best point to stop, although that percentage may be materially increased. Moreover, it has been found to be highly desirable to introduce additional stock into the reservoir during the run.

By thus subjecting to the action of heat the material under treatment in a relatively fine stream, while free carbon is formed in the liquid passing through the coil 4, it courses under the high pressure at which the liquid is circulated so rapidly through the same as to tend to prevent, or minimize the accumulation therein

of the carbon, which it carries back into the reservoir in the bottom of which it may accumulate without injurious effect, since there is no fire under the reservoir. Should, however, a leak accidentally occur in the coil, so little of the liquid will discharge into the fire in the furnace that no damage will ensue. The improved process, therefore, not only greatly decreases the danger of accident, but if the latter occurs the resultant damage is comparatively immaterial. Moreover, it enables from 3 to 7 runs to be made of the still without requiring the apparatus to be stripped and cleaned, whereas where the boiler 1 is fired but one run can be made without stripping and cleaning the carbon deposit out of it.

While a pump is shown for circulating the liquid material, any other way of producing the necessary rapid circulation is intended to be within my invention.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, we declare that what we claim is:

1. A method of distilling petroleum consisting in circulating it forcibly and rapidly in a relatively small stream under confinement and subjection to a cracking temperature from and back to a bulk-supply of the liquid material, taking off and condensing the resultant vapours and maintaining a pressure of said vapours on said supply, and continuing the distillation until and arresting it when distillate to the amount of approximately 55%, or more, of the charging stock has been collected in the receiving drum.

2. A method as claimed in Claim 1, characterized by adding to the stock under treatment in the reservoir additional stock during the run.

3. A method of distilling liquid residue of petroleum-distillation, consisting in circulating said liquid forcibly and rapidly in a relatively small stream under confinement and subjection to heat from and back to a bulk-supply of the residue, taking off and condensing the resultant vapours and maintaining said liquid at a temperature of from about 650° F. to about 850° F. under a pressure thereon of said vapours of about 3 to 7 or more atmospheres, and continuing the distillation until and arresting it when distillate to the amount of approximately 55%, or more, of the charging stock has been collected in the receiving-drum.

4. A method as claimed in Claim 3, in which the pressure of about 3 to 7, or more, atmospheres is exerted both on the liquid, and on the vapour during condensation.

5. The method of distilling petroleum or liquid residue of petroleum distillation substantially as described with reference to the accompanying drawing.

The Applicant, therefore, applies for leave to file a Specification of the Invention pursuant to the Mysore Inventions and Designs Regulation, 1894.

STANDARD OIL COMPANY.
(AN INDIANA CORPORATION)

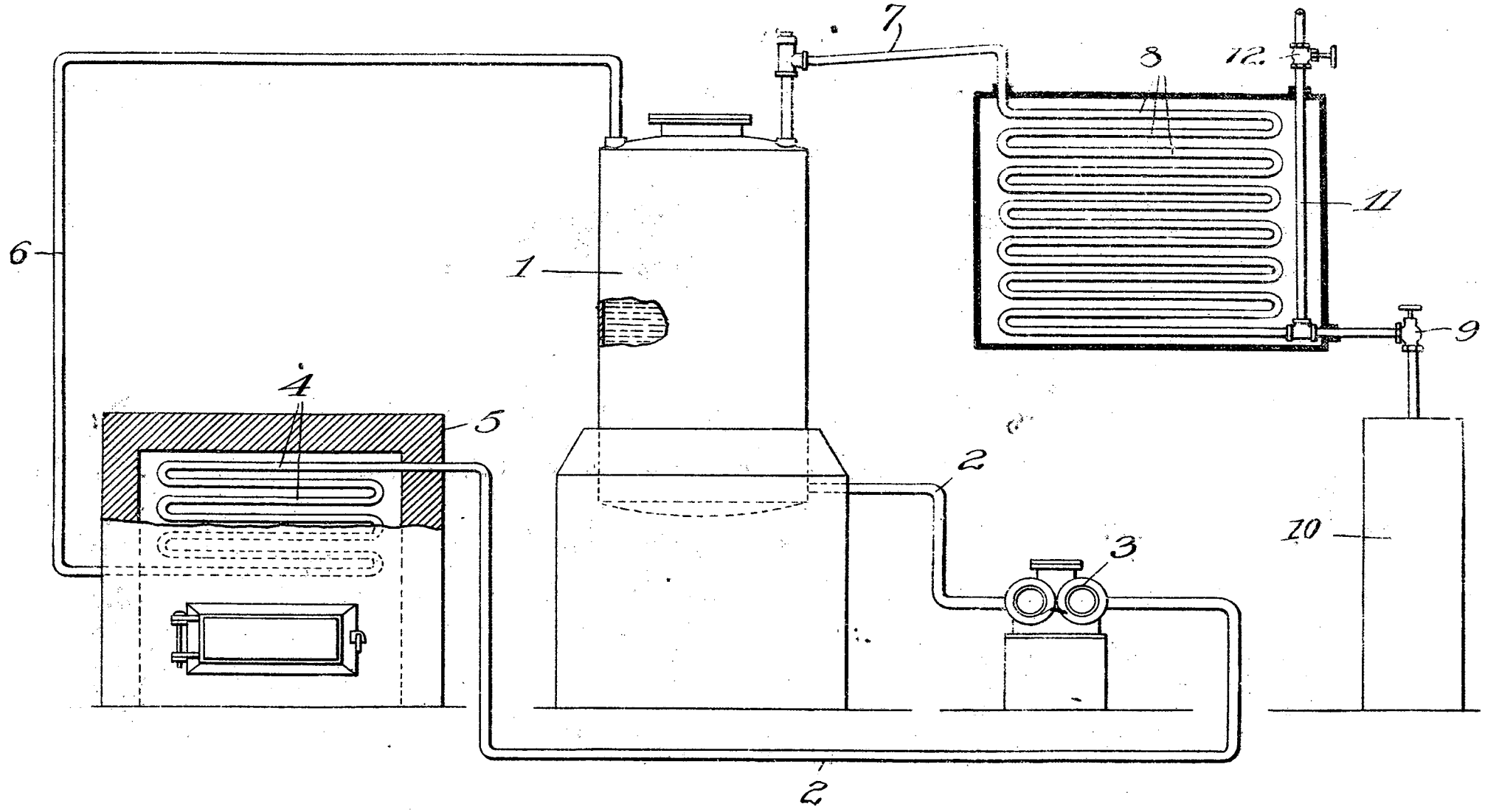
BY W M Burton
PRESIDENT

ATTEST
Geo Stark
SECRETARY.

I, W. M. Burton, President of the Applicant above named, do declare that what is stated in this Application is true to my knowledge, except as to matters stated on information and belief and as to those matters I believe them to be true.

Dated this Eighteenth day of June, 1919.

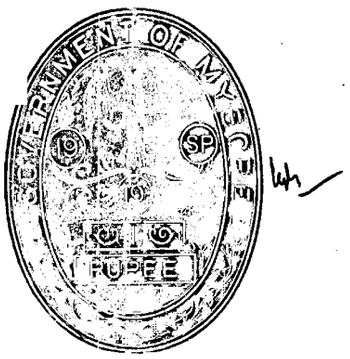
W M Burton



Diamond Oil Co.
Inventor

Form 29

POWER OF ATTORNEY.



IN THE MATTER of the Inventions and Designs Regulation, 1894, of the Government of Mysore,

and

IN THE MATTER of STANDARD OIL COMPANY, an Indiana corporation, Manufacturers, of Whiting, Indiana and Chicago, Illinois, U. S. A.

We, the above-named STANDARD OIL COMPANY do hereby retain, constitute and appoint the Partners or Partner for the time being of the Firm of REMFRY & SON, of Calcutta, British India, as our Agents and Attorneysto apply for and obtain from the Government of Mysore and keep in force an Exclusive Privilege or Letters Patent for "IMPROVEMENTS IN OR RELATING TO PETROLEUM DISTILLATION FOR THE PRODUCTION OF LOW-BOILING-POINT HYDROCARBONS" and we authorise them or either or any of themto sign our name to such papers and writings and do such acts regarding the same, including the appointment of a substitute or substitutes, as may be necessary or expedient.

Dated this Eighteenth day of June, 1919.

STANDARD OIL COMPANY,
(Of Indiana)
By W M Burton
President.

ATTEST:

Geo W Dale
SECRETARY.

Signed, Sealed and Delivered
at Chicago, Illinois
in the presence of:

William Henry Dyrenforth, Chicago, Illinois, Lawyer
(Full name of witness) (Address) (Occupation)

Edgar Dale Steele, Chicago, Illinois, Manager
(Full name of witness) (Address) (Occupation)

2 12.

Form 12d

GOVERNMENT OF MYSORE 9 SP 12 RUPEES

ASSIGNMENT.

WHEREAS, I, EDGAR MILTON CLARK, 26 Broadway, New York, N. Y., U.S.A., Works Manager, have obtained Letters Patent in the United Kingdom No. 1424/15, dated October 28, 1915, for "Improvements in or relating to Petroleum Distillation for the Production of low-boiling-point hydrocarbons"; NOW THEREFORE KNOW YE that for and in consideration of the sum of **Ten Pounds(£10.0.0)** to me in hand paid (the receipt whereof is hereby acknowledged), I the said EDGAR MILTON CLARK have assigned and transferred and by these presents do assign and transfer unto STANDARD OIL COMPANY, an Indiana corporation, of Whiting, Indiana, and Chicago, Illinois, U.S.A., Manufacturers, its successors and assigns, the whole right, title and interest in and to said Exclusive Privilege or Letters Patent to be obtained for the said invention from the Government of Mysore, and all and singular the liberties, powers, privileges and advantages whatsoever appertaining or belonging thereunto the same to be held and enjoyed by the said Standard Oil Company (of Indiana), its successors and assigns for the full term for which such Exclusive Privilege or Letters Patent may be granted or any prolongation or extension thereof as fully and entirely as the same could have been held and enjoyed by me had this Assignment and sale not been made.

IN WITNESS whereof I the said EDGAR MILTON CLARK have hereunto set my hand and seal this 16th day of June, 1919.

Edgar Milton Clark (SEAL)
Inventor's Signature.

Signed, Sealed and Delivered

at New York, N.Y. this 16th day of June, 1919,

in the presence of:

William E. Braid)
Clarence A. Chuman) Two Witnesses.

17

COUPON. The remitter may write here any communication to the payee.

Rs. 13 As. ..

re Standard Oil Co. (Mysore)

(as per our letter of date 23/8/19)

Remitter.

G.R.S. 31.

GOVERNMENT OF H. H. THE MAHARAJA OF MYSORE

No. GENERAL AND REVENUE SECRETARIAT,

Dated Bangalore,.....190

From

Secretary to the Government of His Highness the Maharaja of Mysore,

General and Revenue Departments.

To

Sir,

GPS—1,000—26-3-08

G.M 62-19-2.

Duplicate.

(To be returned to the General and Revenue Secretariat for being placed in the file.

1. No. 194

2. Date of Remittance 13 September 19

3. From whom received Messrs Remfry and Son Calcutta

4. Date of receipt of amount in the General and Revenue Secretariat 30-8-19

5. On what account Application fees for Inv no 3 of 1919-20 by the Standard Oil Co of New York

6. Amount (in figures and words) Rs 10/- Rupees Ten only

7. The head to which it should be credited.

(To be filled in by the Treasury.)

for Chief Secretary to Government,
General Department.

11/9/19

The above amount has been duly received and credited in the Treasury on this date.

Dated 13-9-19

Hd. Asst. Treasurer. Try. Officer.

N. B.—Both the counterfoil and the duplicate to be returned to the General and Revenue Secretariat duly signed by the Treasury Department.

G. R. S. VI—s.v/14]

DRAFT.

SUBJECT.....

.....

.....

Section. 8m
File No. 62-9
Serial No. 3

Diary No. of letter replied to...4218.....

GENERAL AND REVENUE SECRETARIAT
( )
the ..... *191* .

To

The Supt of Stamps

.....

.....

Date of issue.....17/9.....

Signed by.....

Has the honor to forward herewith a Power of Attorney executed by the Standard Oil Co an Indiana Corporation of whitting, Indiana and Chicago, Illinois constituting Messrs. Remfrey and Son, Calcutta as Agents in respect of his/their invention for Improvements in or relating to Petroleum distillation for the production of low Boiling Point Hydro carbons and to request that the same/power and the Deed may be impressed with the Mysore General Stamp of the value of Rupee One/and Rupees Two respectively also herewith forwarded, and the Power/and the Deed returned to this office.

and also a deed of assignment in favour of the Standard Oil Co 24 S.A by mr: Edgar Milton Clark. 26 Broadway New York

By Order,

For Chief Secretary to Government.

G. R. S. VI.—5-v/16]

DRAFT.

SUBJECT.....

.....

.....

Section. Gen
File No. 62-19
Serial No. 4

Diary No. of letter replied to 4218

No. 46923 Gen

To

The Secretary to the
Board for Chemical and Industrial
Research and Scientific advice
Bangalore.

GENERAL AND REVENUE SECRETARIAT,
( )
, the .....191 .

Has the honor to forward herewith

Date of issue 17/9

for ~~report~~ Extract of the Board under Sec. 6, Cl. (2) of the

Signed by Mr MV Iyengar

Mysore Inventions and Designs Regulation, XI of 1894, an application for leave to file a specification of an invention for

Improvements in or relating to Petroleum distillation for the production of low Boiling point Hydrocarbons by The Standard Oil Co, an Indiana Corporation of Whiting Indiana and Chicago, Illinois U.S.A

By Order,

14/9

For chief Secretary to Government.

18/9/19

14/9

1919

6902

S. Dn. 62-19-5

8335 Stamp 39]

WD 02702—GPB—300—16-2-17

No. 112
Enc. 3

OFFICE OF THE SUPERINTENDENT OF STAMPS IN MYSORE,

Bangalore, dated 20th September 1919.

FROM

M. Srinivasamurti, ESQ.,

Superintendent of Stamps in Mysore.

To

C. S. Balasundaram Iyer, ESQ., B.A.,
Chief Secretary to the Government
of Mysore Bangalore

SIR,

I have the honor to return herewith duly stamped the two Powers of Attorney and the Deed of assignment received with your Nos. S. 6922 and S. Dn. 62-19-3 S. 6942 dated 17th September 19, S. Dn. 62-19-3 and to request the favor of an acknowledgment

I have the honor to be
Sir,
Your most obedient Servant,

M. Srinivasamurti

Superintendent of Stamps
in Mysore.

SECRETARIAT
IV
MINOR Depts
22 SEP 1919

25/9

2 copies

G. R. S. VI.—G/32]

SUBJECT.....

.....

.....

Diary No. of letter replied to 6190

GENERAL AND REVENUE SECRETARIAT
( )
, *the* 191 .

Date of issue 18/10

Signed by M Asst. Secy

Section for
File No. 92-19
Serial No. 6.

No. 8677

To

The Superintendent of Stamps

Sir.

I am directed to acknowledge the receipt of the two Powers of Attorney and the Deed of Assignment forwarded with your letter no 112 dated 20th September 1919.

I have the
28/9
for Chief Secy

over.

24.9.19

Rpn. 62-19-6a

DIARY NO. 8628

REGISTERED.

19 -16

To

THE ~~CONTROLLER OF PATENTS~~, SECY TO THE GOVT OF MYSORE,
~~PATENT OFFICE,~~ GENL. & ~~REV.~~ DEPTS.,
~~CALCUTTA.~~ BANGALORE,

12247

FROM MYSORE.

REMFRY & SON,
PATENT & TRADE-MARK ATTORNEYS,
CALCUTTA.

Dated CALCUTTA, the 7th November 1919.

SIR,

10 NOV 1919

I.C.S. Depts. 10 NOV 1919

DEPT.	P.	FILE LR.	M.
FILE INDICATION			
Mysore Pats.(Genl)			

re STANDARD OIL CO. (MYSORE)

(Brit *No.* 1424/15 *dated* 20/4/14 (Convn))

In continuation of our letter of 23/8/19, we now beg to forward herewith Certified Copy of the British Printed Specification No. 1424/15 corresponding to the above Mysore Application.

We have the honour to be,

Sir,

Your very obedient servants,

1 Enclo:-
C/C Brit.B/Specn.
No. 1424/15.

I.M.B.

P/O (Genl.) 1,000—7-6-18 [4-2-14—17-3-11].

I Certify this, including the Drawing forming part thereof, to be a true Copy.
12 AUG 1919
Acting for Comptroller.

[Second Edition.]

N° 1424 A.D. 1915

(*Under International Convention.*)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in the United States), 20th Apr., 1914

Date of Application (in the United Kingdom), 28th Jan., 1915

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 12th Aug., 1915

COMPLETE SPECIFICATION.

Improvements in or relating to Petroleum Distillation for the Production of Low-boiling-point Hydrocarbons.

I, EDGAR MILTON CLARK, of No. 824, Washington Avenue, Alton, Illinois, United States of America, Superintendent of Works, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention relates to an improvement in distilling petroleum or liquid residue of petroleum distillation for obtaining therefrom low-boiling-point hydrocarbons.

ERRATUM.

SPECIFICATION No. 1424, A.D. 1915. (Second Edition.)

Page 2, line 52, *for* "crack" *read* "cracking"

PATENT OFFICE,
October 3*rd*, 1916.

pressure still, in which the distillation is carried on under a high temperature of 650° to 850° F. and a pressure of 3 to 7 atmospheres produced by the vapours discharging from the still.

At 1 is shown an upright tank or reservoir supported in elevated position and having a rounded bottom, from above which leads a pipe 2 containing a force-pump 3, of any suitable construction. This pipe leads from the discharge-side of the pump to one end of a pipe-coil 4 in a furnace 5, which is preferably coal-burning. The opposite end of the coil communicates through a pipe 6 with the reservoir 1 at its upper end, from which leads a discharge-pipe 7 to the upper end of a water-cooled condenser-coil 8, the discharge-end of which, containing a valve 9, leads to a receiving-drum 10 for the distillate. A pipe 11 rises from the lowermost branch of the coil 8 through the condenser-tank, above which the pipe contains a valve 12.

The apparatus shown is particularly designed for the manufacture of gasolene by distilling under pressure the residue of petroleum-distillation, such as fuel-oil, to produce it. In the apparatus illustrated, the liquid material to be distilled is charged into the reservoir, which may contain several thousand gallons. With the pump in action and the furnace going, the valves 9 and 12 being closed, the contents of the reservoir are circulated, passing from the reservoir by way of the pipe 2 through the pump, which forces the liquid in a relatively-fine stream through the coil 4, whence it returns in heated condition through the pipe 6 to the reservoir. By continuing this circulation, the heated liquid returning from the coil 4 to the reservoir heats the contents of the latter and the resultant vapors pass off through the upwardly-inclining pipe 7 and condenser. These vapors build up a pressure on the contents of the reservoir of from about 3 to 7 atmospheres and raise their temperature to about 650° F. and as the run proceeds, to about 850° F. Gases accumulating in the condenser are allowed to escape from time to time, on opening the valve 12, for relieving the gas-pressure, which is liable to accumulate in the coil and obstruct the action of the apparatus. From time to time the valve 9 is opened for discharging the distillate into the drum 10. This distillate is crude gasolene of superior quality, and it may be subjected to further treatment, well-known in the art, for refining it.

By thus subjecting to the action of heat the material under treatment in a relatively fine stream, while free carbon is formed in the liquid passing through the coil 4, it courses under the high pressure at which the liquid is circulated so rapidly through the same as to prevent accumulation therein of the carbon, which it carries back into the reservoir in the bottom of which it may accumulate without injurious effect, since there is no fire under the reservoir. Should, however, a leak accidentally occur in the coil, so little of the liquid will discharge into the fire in the furnace that no damage will ensue. My improved process, therefore, not only greatly decreases the danger of accident, but if the latter occurs the resultant damage is comparatively immaterial. Moreover, it enables from 3 to 7 runs to be made of the still without requiring the apparatus to be stripped and cleaned, whereas where the boiler 1 is fired but one run can be made without stripping and cleaning the carbon deposit out of it.

While a pump is shown for circulating the liquid material, any other way of producing the necessary rapid circulation is intended to be within my invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A process of distilling petroleum consisting in circulating it forcibly and rapidly in a relatively small stream under confinement and subjection to a cracking temperature from and back to a bulk-supply of the liquid material, taking off and condensing the resultant vapours and maintaining a pressure of said vapours on said supply.

2. A process of distilling liquid residue of petroleum-distillation, consisting in circulating said liquid forcibly and rapidly in a relatively small stream under confinement and subjection to heat from and back to a bulk-supply of the residue, taking off and condensing the resultant vapours and maintaining said liquid at a temperature of from about 650° F. to about 850° F. under a pressure thereon of said vapours of about 3 to 7 atmospheres.

3. A process as claimed in Claim 2, in which the pressure of about 3 to 7 atmospheres is exerted both on the liquid, and on the vapour during condensation.

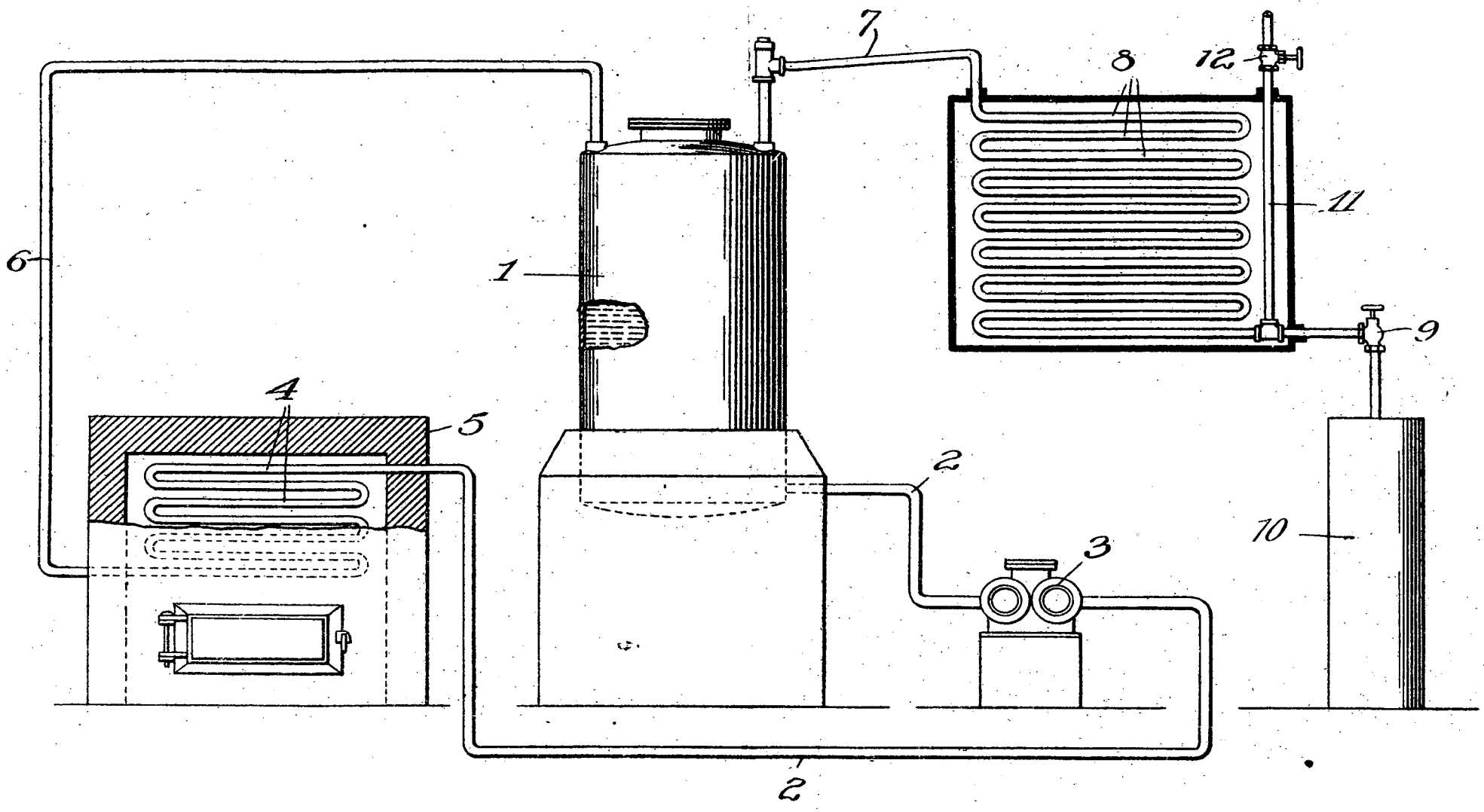
4. The process of distilling petroleum or liquid residue of petroleum distillation substantially as described with reference to the accompanying drawing.

Dated this 28th day of January, 1915.

BOULT, WADE & TENNANT,
111/112, Hatton Garden, London, E.C.,
Chartered Patent Agents.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.
[Wt. 3.—125/8/1916.]

(2nd Edition)



[This Drawing is a full-size reproduction of the Original.]

Malby & Sons, Photo-Litho

CHIEF SECRETARIAT
IV
MINOR Depts.
19 DEC 1919

6874

DIARY NO.....

19 -19

No. 182

Board for Chemical & Industrial
Research & Scientific Advice,
Bangalore, 18th December 19.

16000

From

S. G. Sastry, Esq.,B.A.,M.Sc.,F.C.S.,
Secretary, Board for Chemical & Industrial
Research & Scientific Advice, Bangalore.

To

C. S. Balasundaram Iyer, Esq.,B.A.,
Chief Secretary to the Government of His
Highness the Maharaja of Mysore, General
Department, Bangalore.

Sir,

Ref:- Your No.G.6923/G.M.62-19-4 dated 17-9-19.

With reference to the above, I am directed to state that the application for leave to file the specification may be granted.

The application is returned herewith.

I have the honor to be,
Sir,
Your most obedient servant,

S. G. Sastry

Secretary.

G. R. S.VI—s.-v/21]

Government of Mysore.

GENERAL DEPARTMENT

Register No. 3 ..... of 1919-20.

Bangalore, the 9/1/1920

WHEREAS an application, dated the 23rd August 1919 and received on the 30th August 1919, has been submitted under Section 5 of the Mysore Inventions and Designs Regulation, 1894, by The Standard Oil Company an Indiana Corporation Manufacturers of Whiting Indiana and Chicago, Illinois United States of America (hereinafter referred to as "the applicant") for leave to file a specification of an invention for Improvements In or Relating to Petroleum Distillation for the Production of Low-Boiling-Point Hydrocarbons

And whereas the applicant has duly complied with all the requirements of Section 5 of the said Regulation;

The Government of Mysore are pleased, under Section 6 of the said Regulation, to authorize the applicant to file a specification of the said invention in accordance with the provisions of the said Regulation.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By Order of the Government of Mysore,

For Chief Secretary to the Govt. of Mysore,
~~General Department.~~

Certified that the fees prescribed in the fourth schedule to the Mysore Inventions and Designs Regulation, 1894, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of Section 8 of the said Regulation on this the Nineteenth day of January 1920.

For Chief Secretary to the Govt. of Mysore,
~~General Department.~~

(*Section 8 of the Inventions and Designs Regulation, 1894.*)

8. (1) If within six months from the date of an order under Section 6, Sub-Section 1), or within such further time, not exceeding three months, as the Government of Mysore, in its discretion, may, on cause shown to its satisfaction and on payment of the fee prescribed in that behalf in the fourth schedule, see fit to allow, the applicant causes a specification of his invention to be filed in manner by this Part required, and the fee prescribed in the fourth schedule in respect of the filing of the specification to be paid, the applicant shall, subject to the other provisions of this Part, be entitled to the exclusive privilege of making, selling and using the invention in the Territories of Mysore, and of authorizing others so to do, for a term of fourteen years from the date of the filing of the specification.

(2) But an exclusive privilege in respect of an invention of a new manufacture shall, notwithstanding anything in Sub-Section (1), cease, if the inventor fails to pay, within the time limited in that behalf by the fourth schedule, any fee prescribed in that schedule in respect of the continuance of the privilege.

(3) If, nevertheless, in any case, by accident, mistake, or inadvertence, an inventor fails to pay any such fee within the time so limited, he may apply to the Government of Mysore for an enlargement of the time for making the payment.

(4) Thereupon the Government of Mysore may enlarge the time accordingly, on payment of the fee prescribed in that behalf in the fourth schedule, and subject to the following conditions, namely :—

(*a*) the time for making a payment shall not in any case be enlarged for more than three months ; and

(*b*) if any suit is instituted in respect of an infringement of the exclusive privilege committed after a failure to make a payment within the time limited for the making thereof and before the enlargement of that time, the Court disposing of the suit may, if it thinks fit, refuse to award or give any damages in respect of the infringement.

W D 02300—GPB—500—24-11-16

G. R. S. VI—s-v/13]

DRAFT.

SUBJECT.....

.....

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Section. Genl
File No. 62-19
Serial No. 9

No. G/15538 dne

Diary No. of letter replied to....10876/19

To

Messrs Remfrey and Son
Patent and Trade mark Attorneys
Calcutta

GENERAL AND REVENUE SECRETARIAT,
( )
, *the*.....191 .

GENTLEMEN,

With reference to your letter No. nil
dated the 23rd August 1919.

Date of issue.....9/1

I am directed to forward herewith G. O.
No. G./15537 / G. M. 62-19-8 dated the 9/1/20

Signed by.....

191 , authorizing The Standard
oil Company an Indiana Corporation Manufacturers
of Whiting, Indiana and Chicago, Illinois, U.S.A
to file a specification of an invention for
'Improvements in or relating to Petroleum
Distillation for the Production of
Low Boiling Point Hydrocarbons
and to request that the fact may be com-
municated to the party concerned.

I have, etc.

Recd 20.12.19

3/1/20

26/12

Foreign *Secretary to Government.*

8/20.1.20

DIARY NO. 2298

REGISTERED.

To

THE ~~CONTROLLER OF PATENTS~~, SECY TO THE GOVT OF MYSORE,
~~PATENT OFFICE~~, GENL. & REV. DEPTS.,
~~CALCUTTA~~. BANGALORE,
MYSORE.

FROM

REMFRY & SON,
PATENT & TRADE-MARK ATTORNEYS,
CALCUTTA.

18231

Dated CALCUTTA, the 13th January 1920.

OFFICE OF THE SECRETARIAT IV MINOR Depts. 17 JAN 1920

DEPT.	P.	FILE LR.	M.
FILE INDICATION			
Mysore Pats.(Genl)			

SIR,

re STANDARD OIL CO. (MYSORE)

No. 3/19-20 *dated* -

Pursuant to the Order granting leave in this matter dated 9th January 1920, Register No. 3 of 1919-20, we have the honour to forward herewith 4 copies of the Specification of THE STANDARD OIL COMPANY, an Indiana Corporation, Manufacturers of Whiting, Indiana and Chicago, Illinois, United States of America, in respect of their Invention for "IMPROVE-"MENTS IN OR RELATING TO PETROLEUM DISTILLATION FOR THE PRO-"DUCTION OF LOW-BOILING-POINT HYDROCARBONS".

The abovementioned Order is enclosed and we solicit the favour of your filling in the Certificate at foot thereof and having same signed.

A Post Office Order for Rs.30/- is sent today.

We have the honour to name our Office in Calcutta as the address for Service under the Act.

We have the honour to be,
Sir,
Your very obedient servants,

By P.O.O:-
Rs.30/-

Enclos:-
4 Specns.
Order.

I.M.B.

P/O (Genl.) 1,000—7-6-18 [4-2-14—7-3-11].

Name-slip of office of payment.

COUPON. The remitter may write here any communication to the payee.

Rs. 30 As. — ac Standard Oil Co. (Rangoon)
No. 3/19-20.

(as per our letter of date 13/1/20).

Remitter.

Received 19.1.20. Dr. M.D. Bramhall

GPB—3,000—20-7-14

G. R. S. 48.

GOVERNMENT OF H. H. THE MAHARAJA OF MYSORE.

No. GENERAL AND REVENUE SECRETARIAT.

Dated Bangalore,.....191 .

From

D. M. NARASINGA RAO, ESQ., B.A., B.L.,

Offg. Secretary to the Government of H. H. the Maharaja of Mysore,

General and Revenue Departments.

To

First Assistant to the Hon'ble the Resident in Mysore.

SIR,

Entered

Duplicate. FM. 62-19-11

(To be returned to the General and Revenue Secretariat for being placed in the file.

1. No. 222.
2. Date of Remittance 21 January 1920
3. From whom received Messrs Remfry ..... and Sons, Calcutta
4. Date of receipt of amount in the General and Revenue Secretariat 19-1-20
5. On what account Judicial fees for Suit no. 3 of 1919-20 by the Standard Oil Co. Chicago
6. Amount (in figures and words) Rs 30/- Rupees Thirty only
7. The head to which it should be credited.

(To be filled in by the Treasury.)

K. Subbarayappa

Joint *Secretary to Government,*

~~*General Department.*~~

The above amount has been duly received and credited in the Treasury on this date.

Date 21-1-1920

Manuscript 1225

Hd. Acctt. *Treasurer.* *Try. Officer.*

N. B.—Both the counterfoil and the duplicate to be returned to the General and Revenue Secretariat duly signed by the Treasury Department.

Draft C

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE.

GENERAL AND REVENUE SECRETARIAT

Bangalore, Dated 23/1/1920.

No. 4/69324

for: 62-1912

NOTIFICATION.

(PATENT)

The following specification of an invention has been filed in accordance with Sections 8, 9, 10 and 11 of Regulation XI of 1894 (The inventions and Designs Regulations) and is open to inspection at the Mysore Government Secretariat on application to the Chief Secretary to the Government of His Highness the Maharaja of Mysore, and on payment of a fee of one Rupee.

1 By The Standard Oil Company an Indiana Corporation of Whiting Indiana and Chicago, Illinois United States of America.

"Improvements in or relating to Petroleum Distillation for the Production of Low Boiling Point Hydro-Carbons

By Order,

Des 25/1/20.
For Chief Secretary to Government.

BK 24/1/20

Subject 21/1/20

To

The Compiler, Mysore Gazette, for publication.

735

G. R. S. VI—s-v/18

DRAFT.

SUBJECT.....

.....

.....

No.

Diary No. of letter replied to....12298

Section. Gen
File No. 62-19
Serial No. 13

GENERAL AND REVENUE SECRETARIAT
( )
, *the*.....*191* .

Date of issue..... 28/1/20

Signed by.....

E/16935 (2)

To

Messrs Remfry and Son
Patent and Trade mark Attorneys
Calcutta

Sir,

With reference to your letter dated 13th January '20 I am directed to forward copy of a Notification No. E/16934 dated ~~27th~~ 28/1/20 issued by this Government in regard to the invention filed by you under Regulation XI of 1894 (The Inventions and Designs Regulations.)

The order granting permission to file specification is herewith returned, with the certificate at foot, duly filled in and signed.

I have, etc.,

20/1/20.

Secretary to Government.

20/1/20

20/1/20

G. R. S. VI—G/32]

3 drafts

SUBJECT.....

.....

.....

Diary No. of letter replied to 12298

GENERAL AND REVENUE SECRETARIAT

( )

the *191* .

Date of issue 28/1

Signed by [illegible]

Section G. M

File No. 62-19

Serial No. 14

No. G/16936-8

To

The Chief Engineer

" Supt. Govt Gardens

" Secy to the Board for Chemical and Industrial Research and Scientific Advice

Has the Honour to forward herewith for record in his office a copy of the Specification of an invention for "Improvements in or relating to Petroleum Distillation for the production of Low Boiling Point Hydro-carbons" by the Standard Oil Co. an Indiana Corporation of Whiting, Indiana and Chicago, Illinois, U.S.A

By order

[illegible]

21/1/20

20/1/20